

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

YOUNG-DOO KIM, ET AL.

Application No.:

Filed:

For: **APPARATUS AND METHOD FOR  
ADAPTIVELY MODULATING SIGNAL  
BY USING LAYERED TIME-SPACE  
DETECTOR USED IN MIMO SYSTEM**

Art Group:

Examiner:

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure, enclosed is a copy of Information Disclosure Statement by Applicant (form PTO/SB/08), which is being submitted concurrently with the Utility Application. It is respectfully requested that the cited references be considered and that the enclosed copy of PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

The submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made in the subject application and is not to be construed as an admission that the information cited in this statement is material to patentability.

Please charge any fees due to Deposit Account 02-2666. A duplicate copy of the Fee Transmittal (PTO/SB/17) is enclosed for this purpose.

Date: 1/15/03

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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# Information Disclosure Statement

New U.S. Patent Application for  
APPARATUS AND METHOD  
FOR ADAPTIVELY MODULATING SIGNAL  
BY USING LAYERED TIME-SPACE DETECTOR  
USED IN MIMO SYSTEM  
Our Ref. No.: P03E1013/US/jk

Reference No.:

- (1) KR Laid-Open No. 98-13075
- (2) US Patent No. 6,097,771
- (3) US Patent No. 4,679,227
- (4) US Patent No. 6,317,466
- (5) Multiuser OFDM with Adaptive Subcarrier, Bit, and Power Allocation  
*(IEEE JOURNAL ON SELECTED AREA IN COMMUNICATIONS, VOL. 17, NO. 10, OCTOBER 1999, Pages 1747-1758)*
- (6) SPATIO-TEMPORAL CODING FOR WIRELESS COMMUNICATIONS  
*(0-7803-3336/5/96, 1996 IEEE, Pages 1809-1814)*
- (7) Iterative Bit & Power Allocation for V-BLAST based OFDM MIMO System in Frequency Selective Fading Channel  
*(0-7803-7376-6/02, 2002 IEEE, Pages 271-275)*
- (8) A Simplified Bit Allocation for V-BLAST based OFDM MIMO System in Frequency Selectie Facing Channel  
*(0-7803-7400-2/02, 2002 IEEE, Pages 411-415)*
- (9) V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel  
*(0-7803-4900-8/98, 1998 IEEE, Pages 295-300)*

<p>Substitute for form 1449A/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p><i>(use as many sheets as necessary)</i></p>				<b>Complete if Known</b>	
Sheet	1	of	2	Application Number	
				Filing Date	
				First Named Inventor	Young-Doo KIM
				Art Unit	
				Examiner Name	
				Attorney Docket Number	51876P442

Examiner Signature		Date Considered	
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Based on PTO/SB/08A (08-03) as modified by Blakely, Solokoff, Taylor & Zafman (wlr) 08/11/2003.

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<p>Substitute for form 1449A/PTO</p> <p><b>INFORMATION DISCLOSURE</b></p> <p><b>STATEMENT BY APPLICANT</b></p> <p><i>(use as many sheets as necessary)</i></p>				<p><b>Complete if Known</b></p>		
<p>Sheet</p>		<p>2</p>	<p>of</p>	<p>2</p>	<p>Application Number</p>	
					<p>Filing Date</p>	
					<p>First Named Inventor</p>	<p>Young-Doo KIM</p>
					<p>Art Unit</p>	
					<p>Examiner Name</p>	
					<p>Attorney Docket Number</p>	<p>51876P442</p>

## NON PATENT LITERATURE DOCUMENTS

Examiner Signature	Date Considered
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